

W5YI REPORT

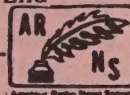
Up to the minute news from the worlds of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

Dits & Bits

Fred Maia, W5YI, Editor, P.O. Box 10101, Dallas, TX 75207

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VOL. 7, Issue #17

\$1.50

PUBLISHED TWICE A MONTH - September 1, 1985

902-928 Ham Band Okayed! 420-430 Dropped

In a Notice of Proposed Rule Making issued last fall, the FCC proposed to implement certain frequency allocations to the Amateur Radio Service approved in the Final Acts of the Geneva 1979 World Administrative Radio Conference.

Specifically the Commission proposed to add the 10.100-10.150 MHz (30 meter), the 24.890-24.990 MHz (12 meter) and the 902-928 (35 centimeter) MHz bands to the Amateur Radio Service. That was the "good news".... the "bad news" was that it would be necessary to remove the 420-430 MHz band from the Amateur Radio Service north of Line "A". (Line "A" is an imaginary line that runs about 150 miles inland from Canada from Aberdeen, Washington, to Searsport, Maine.)

The FCC has already issued rules addressing the thirty and twelve meter ham bands. On August 15th, the Commission released a Second Report and Order in docket No. 84-960 dealing with the 902-928 MHz and the 420-430 MHz ham bands.

FIRST... THE "BAD NEWS"... 420-430 MHz

Losing this subband shouldn't have come as a surprise to anyone. The FCC said last October that it would be necessary to remove the Amateur Radio Service along the northern border to protect Canada's newly reallocated Fixed and Mobile Service. Some very large

cities were included... Seattle, Detroit, Cleveland... Buffalo... among them. (The Commission allowed UHF amateur stations to continue to operate in that spectrum until final rules were adopted.)

The United States entered into a treaty arrangement with Canada on April 2, 1982, agreeing to provide protection along the Canadian border from U.S. interference. The FCC also said that it would grant amateur radio operators waivers on a case-by-case basis to operate in this band, subject to successful prior coordination by the FCC with the Canadian administration.

The FCC said that, to date, they have not been able to arrange prior coordination of formal waiver requests to operate north of line "A" at 420-430 MHz with the Canadian administration. The Commission did say, however, that through informal notification procedures, they might be able to arrange certain UHF amateur operation on a secondary non-interference basis.

Any waiver of the rules providing for operation north of Line A would have to "make a technical showing that the operation would cause no harmful interference to Canadian radio operations." Specific requests should be directed to the Private Radio Bureau Licensing Division in Gettysburg, Pennsylvania, 17325

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NOW... THE "GOOD NEWS"... 902-928 MHz.

The FCC proposed in the NPRM last fall to implement allocation of the 902-928 MHz (35 centimeter) frequency band to the Amateur Radio Service in all of the United States except for Colorado, Wyoming and U.S. possessions in Region 3. "US267", (a WARC footnote) specifically prohibits 902-928 MHz amateur operation within the states of Colorado and Wyoming, bounded by the area of: latitude 39° N to 42° N and longitude 103° W to 108° W.

WHAT DID THE COMMENTS SAY?

Not all of the comments were in favor of adding the band to the amateur service. Many commenters (mostly business firms and telecommunications groups) felt that since the FCC rejected PRCS (Private Radio Communications Service)... the amateur service should be required to make a showing of the need for the 902-928 frequency band. Some firms said flatly that the Amateur Radio Service did not need the spectrum.

PRCS was to have been an innovative low cost mobile telephone service utilizing 900-MHz addressable microprocessor based radio links to a user's own home or office telephone. It was proposed by General Electric three years ago in a massive three pound bound volume petition. The FCC refused to consider the service further when GE said they were pulling out of the project. The Commission also said that there was an inadequate amount of spectrum in the land mobile reserve - unallocated frequencies that lie between the UHF TV band and 950 MHz - to accommodate all requirements of petitioners.

Maintaining that another widely used secondary personal radio service "could receive considerable harmful interference from and cause harmful interference to current primary government military radiolocation users, the FCC said... "We therefore decline to consider a personal radio service allocation in the 902-928 MHz band in this proceeding. The amateur community faces no additional burden of proof to retain the 902-928 MHz domestic allocation..."

Three firms opposed the amateur radio service 900-MHz allocation on the basis that it would interfere with Part 15 field disturbance sensors - those gadgets that sound an alarm when someone enters a protected area - which are also authorized in this band. The FCC pointed out that Part 15 devices are also secondary and must not cause harmful interference to and must suffer interference from all other operations.

One amateur, Joseph Schroeder, W9JUV, recommended reducing amateur power levels in Colorado and Wyoming rather than prohibiting all amateur operations there. The Commission said that Government (military) operations in that area required protection from interference, but that they expected this requirement would become unnecessary and could be dropped within a year.

WHAT WAS AUTHORIZED FOR 902-928 MHz?

While not a part of the original WARC footnotes, the Commission is prohibiting amateur 902-928 MHz. operation inside the White Sands Missile Range and restricted amateur power levels to a maximum transmitter peak envelope power output of 50 watts. "This action is necessary to protect essential primary radiolocation operations at the range," the FCC ruled.

In their comments, amateurs wanted full 1500 watt peak envelope power for 902-928 MHz stations in repeater operation, wideband digital transmissions and the capability to transmit communications consisting of multiplexed channels. With the exception of the White Sands restriction, the FCC approved this for all stations.

A wide variety of emissions were authorized... N0N, A1A, A2A, A2B, A3E, A3C, A3F, F1B, F2B, F3E, G3E, F3C, F3F, F8E, P0N. There are no subbands. No 902-928 operation is authorized to U.S. possessions outside of Region 2 since the amateur service is only ITU allocated in Region 2, North and South America.

Amateur use of this band will be secondary to operation of Government radiolocation stations, AVM (Automatic Vehicle

I am a currently licensed Extra Class amateur radio operator and wish to be a volunteer examiner. I have never had my station or
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902-928 MHz BAND PLAN

- 902-904 MHz Narrow Band Weak Signal
- 902.0-.8 SSTV, FAX, ACSB, Experimental
- 902.8-903.0 EME, CW Expansion
- 903.0-.05 EME (Earth-Moon-Earth)
- 903.07-.08 CW Beacons
- 903.1 CW, SSB Calling Frequency
- 903.4-.6 Crossband Linear Translator Inputs
- 903.6-.8 Crossband Linear Translator Outputs
- 903.8-904.0 Experimental Beacons
- 904-906 Digital Communications
- 906-907 Narrow-Band FM simplex channels every 25 kHz.
- 906.5 National Simplex Frequency
- 907-910 FM Repeater Inputs (119 pairs every 25 kHz beginning at 907.025)
- 910-916 Amateur Television
- 916-918 Digital Communications
- 918-919 Narrow Band FM Control Links and remote bases
- 919-922 FM Repeater Outputs
- 922-928 Wide-Band Experimental, Simplex ATV, Spread Spectrum.

The band is available to the amateur community effective 0001 UTC, September 28, 1985.

(Action by FCC, adopted August 9, 1985)

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ADD NOVICE EXAMS TO VEC PROGRAM...

Robert A. Scupp, WB5YYX, has filed a Petition for Reconsideration of an FCC proposal (NPRM Docket 85-196) that specifies Volunteer Examiners solely... rather than VE's and Volunteer Examiner Coordinators

both... create Novice tests. Scupp feels that VEC's should have these test materials available for VE use should they be needed.

Scupp says that proposed §Part 97.517 does not provide for a VEC designing, assembling, printing and distributing Element 2 (Novice written test) or Element 1A (Novice 5-wpm code) examinations, therefore the proposal does not permit the VE team to obtain Element 2 or 1A examinations from the VEC.

He asks that VEC's not only maintain the Novice question pool, but also have available for volunteer examiner use both a 5 w.p.m. code test and the Element 2 written examination.

Scupp points out that the Commission said in their Report and Order (Docket 82-727, July 18, 1983) that they "may consider (including Novice exams) at a later date after evaluating the success of the broader program."

"The Commission's original intent was to delegate the entire examination process to VEC's in whole," Scupp argued in his August 13th Petition for Reconsideration. He suggested that any Volunteer Examiner Coordinator that objects to providing Novice test materials should reevaluate continuing as a VEC.

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The League has formally replied to the Comments filed on their proposal for Novice Class enhancement. The ARRL reaffirmed their position that additional questions should be required in the Element 2 (written) Novice examination covering the new voice and data privileges proposed in their petition.

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I am a currently licensed Extra Class amateur radio operator and wish to be a volunteer examiner. I have never had my station or operator license revoked or suspended. I do not own a significant interest in nor am an employee of any company or entity engaged in making, preparing or distributing amateur radio equipment or license preparation materials. My age is at least 18 years old.

WOULD YOU LIKE TO BECOME A VOLUNTEER EXAMINER? Under "The W5YI Report" Program? If so, please send a copy of your Extra Class license, this signed statement, and a SASE to: W5YI-VEC; P.O. Box #10101; Dallas, Texas 75207. A certificate (optional) is also available for \$1.00. Details and accreditation materials will be sent to you within a two week period.

MORE ON WIRE(LESS) TAPPING....

We received a letter from Dave Siddall, K3ZJ president of the Capitol Hill Amateur Radio Society (with headquarters in the U.S. Senate) on the story we did on "Wire(less) Tapping." I had mentioned that contents of cordless and/or cellular phone calls might not be protected by statute since radio is not private.

"...divulgence of cordless telephone call information is strictly prohibited..." He said that §Section 605 (now 705) which prohibits revealing private communications "does not include police officials - Congress stated this in 1968 when it reenacted the section. Therefore what is heard on the airwaves can be divulged to the police... (but) cannot be divulged to others."

"The police themselves are governed by the wiretap statutes, not Section 605. Courts in both Kansas and Rhode Island have ruled that users of cordless phones have 'no expectation of privacy' in their conversations and therefore the police are not required to obtain a warrant before listening in to the radio portion of the cordless telephone conversation."

"It remains to be settled whether a party to a telephone call who is not using a cordless unit and without knowledge that the other party is using such a unit has such an 'expectation of privacy' as to require a warrant under the statute. Both cases were proceedings against the person using the cordless set, not the party using a wireline set."

"The relevant point for hams is that nothing overheard on the airwaves outside the ham, CB and broadcast bands can be divulged except to the police."

Dave is a government attorney specializing in advising members of Congress of telecommunications law. His office is in the Library of Congress, Washington, D.C..

STILL MORE ON "WIRE(LESS) TAPPING"...

N5AUX, Ken Winters, of Arlington, Texas, responded to the "Wire(less) Tapping"

article by stating that although there are 1,332 frequencies allocated for cellular telephone use, you can "get your fill of some really juicy stuff on as few as five frequencies... only three-tenths of a percent of spectrum allocated." For what it is worth, here is what he said...

"Cellular frequencies are divided between two separate 'systems' called 'System A' and 'System B', each having 312 'user channels' and 42 'control channels.' Each channel uses two frequencies with mobiles transmitting on one frequency while simultaneously receiving on the other. System A is allocated to existing 'wire-line' service companies and System B to non-wire (radio) common carriers."

"Monitoring the mobiles' transmitting frequencies is not very practical because the mobile transmitters run only 3 watts and have very limited range. Besides, you can only hear one side of the conversation that way. The base transmitters, however, run about 12 watts with antennas about 150 feet high and transmit both sides of the conversation."

"While it might appear that there are some 312 (or 624 for both systems) frequencies to monitor, not so! Even if you have both systems A and B operating in your area, not every 'cell' operates on all available channels. In fact, most cells will be transmitting user conversations on less than 50 frequencies."

"Each cell-site may have as few as 5 active channels. The base transceivers are frequency-synthesized and can be configured to operate on any of the 333 channels allocated to either system."

Ken suggests that you scan (search) the range of frequencies (System A Base - 870.03 to 879.36 MHz and System B Base - 880.65 to 889.98 MHz) and determine through activity analysis the five frequencies to program into your scanner for "telephone soap opera dialog."

Ken, a long time ham, is the author of the soon-to-be-released "USA Frequency List." He specializes in listening to some very interesting stuff.

for Wyoming and Maine. (They did Work All Continents.)

Even the QST July and August articles never mentioned the TNC-2's price... or even their address. (By the way, the magic telephone number is 602-746-1166 Address: P.O. Box 22888; Tucson, Arizona 85734.) We think we are the first to publish it and hope that we don't cause them additional problems.

Young people are into computers. Packet radio is the perfect marriage of computers and the amateur radio environment... allowing people to communicate computer to computer. A true computer network exists in amateur radio. Their motto says it all... "Join the packet radio revolution."

R. L. DRAKE CONSIDERING SALE OF FIRM

Ex-ham equipment maker, R. L. Drake Company, now a major factor in the backyard satellite station market, has retained an investment firm to advise and consider proposals on a merger or acquisition of the firm. The Drake family has operated the communications manufacturing firm since 1943.

Their success came, however, just four years ago when they focused on satellite TV equipment. In 1982 their sales were \$14 million, earnings: \$2.4 million. Two years later their profit was \$14 million! They claim a 25% share of the satellite earth-station receiver market. Not bad for a company whose claim to fame for forty of their forty-three year history was amateur and marine radio products!

• The ARRL Letter has a new editor! He is AK7M, David Newkirk. His father was the DX editor for QST for years! Dave's title is actually, Manager, Regulatory Information Branch. Bruce Hale, KB1MW, previous ARRL Letter editor is now in the League's technical department.

• ICOM has a new general coverage receiver that covers 25 to 2000 MHz. The IC-R7000 has 99 memory channels with direct keyboard entry. FM/AM/SSB modes with full scanning capability. List is \$899, but \$799 should buy it. Available in October.

• Over a hundred hams were involved in providing communications support during the recent outbreak of forest fires in California. Twelve major fires burned more than 125,000 acres.

• FCC has ruled that states can not bar voice and data services transmitted over cable TV lines! Thus state Public Utility Commissions can not prevent a cable system from offering telephone service and other non-video services which bypasses the local telephone system!

• SPACE, the Satellite Television Industry Association, has told members not to pay fees imposed by TBS, ESPN and USA network for reception of their unscrambled signals by home earth station owners. SPACE said the fees were not valid since they were higher than those charged cable subscribers and not set through "good faith marketplace negotiation." SPACE quoted Barry Goldwater as saying that rates can not be unilaterally imposed.

• AM broadcasters are already pondering the obstacles they will face when they are allocated the 1605-1705 AM band expansion approved at WARC'79. The more than 400 million AM receivers in the hands of the public now only tune to 1605! Startup is projected for 1990. It will be a long time before they can compete in the marketplace.

• A Sacramento federal appeals court has ruled that receiving over-the-air (MDS) pay-TV programming without paying for it is illegal. The Ninth Circuit Court of Appeals said that the act of viewing pay TV without authorization broke the law forbidding the "divulgement or publication" of intercepted transmissions. The signals were not scrambled. A state court had previously ruled that state law does not prohibit people from intercepting unscrambled signals. The federal decision takes precedence over the state's ruling.

• FCC Commissioner Henry Rivera has resigned from the FCC effective September 15th to go into private law practice. It is believed that the White House will choose a minority group representative to replace Rivera. By law, he will be a Democrat since three Republicans already sit on the Commission.

DO YOU EXCERPT OR QUOTE FROM "THE W5YI REPORT?"

WOULD YOU DO US A FAVOR?

This is, of course, allowed without limitation. The W5YI Report appears on many computer bulletin boards and in club newsletters. We do not get any income from this and would appreciate it if you would publish our small classified ad (see margin between pages 4 & 7) on license preparation materials. Thanks!

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The ARRL does not envision the new Element 2 as being more difficult... only more comprehensive. The League wants the question pool increased to 300. It is 200 now.

The League also modified their original proposal and now asks that the Novice power limit of 200 watts PEP be retained for all amateurs operating in the 80, 40 and 15 meter Novice bands. They originally petitioned for 1500 watts output so that existing amateurs would not lose privileges at 28 MHz and up.

HAM CONVENTION TO DEBUT IN LAS VEGAS

Janice L. (N7YL) and John D. (W7IA) Weaver are really promoting their Las Vegas "OctoberVention" to be held October 31 through November 3! They want their convention to be the HamVention of the west. It is timed to be six months removed from Dayton. OctoberVention will be the last major hamfest of the season "with perfect timing for the introduction of new products directed at holiday season purchases."

They expect 2,500 attendees (only 10% of what Dayton usually draws), still - they feel it is a start. Janice and John plan full page ads in all September and October ham magazines. It has already been dubbed the ARRL Pacific Division Convention.

Over 18,000 square feet of carpeted (indoor) exhibit space is planned with ninety-one 10' X 10' booths. They also will have a giant outdoor flea market (\$10 a space for exhibitors), FCC exams, technical and ARRL forums, Saturday night pool-side cocktail party and 8:00 p.m. banquet.

Tickets are \$15.00 which includes the cocktail party and tickets for hourly drawings. (Banquet is an additional \$15.00) Special airline (call toll free 1-800-634-6705) and hotel room discounts have also been arranged. A very ambitious undertaking for the two! (OctoberVention; P.O. Box 19675; Las Vegas, NV 89132 - Tel: 702-361-3331)

GLEANINGS FROM THE JULY FCC STATS

Amateur applications processed by the FCC's Gettysburg, PA, licensing facility in

July 1985 increased over July 1984, but still below 1982, 1983 levels. The figures:

FCC FORM 610'S PROCESSED FOR MONTH

| Month/Year: | 1982 | 1983 | 1984 | 1985 | % |
|-------------|--------|--------|-------|--------|------|
| July | 11,799 | 13,869 | 7,241 | 10,927 | +51% |

Ten unlicensed applicants took volunteer administered examinations during July and walked out of the test session with Extra Class tickets! The most ever for a single month! Usually it is 2 or 3.

Total July new amateurs: 1479, Total Decrease (amateurs failing to renew): 2,416. Net decrease: 937. Total amateur population as the end of July: 410,287 (plus 2268 club stations, 165 military recreation stations and 359 RACES stations.) By amateur class:

| 1985 | Extra | Advan. | Gen. | Tech. | Novice | Total |
|------|-------|--------|--------|-------|--------|--------|
| July | 37548 | 97565 | 116812 | 82389 | 75973 | 410287 |
| %: | 9.1% | 23.8% | 28.5% | 20.1% | 18.5% | 100.0% |

If we read the FCC statistics correctly, the oldest amateur to have a license processed so far this year is 103, youngest... just 4 years old. The median age for all applications acted on during 1985 is 28 years old.

TONY ENGLAND'S NEWS CONFERENCE

The post-flight news conference was held August 14th. Here are some of the more interesting highlights...

(1.) Astronaut Tony England, WØORE, worked more than a hundred earthbound stations during the mission. Thousands more monitored SSTV signals that came from Challenger in an automated downlink mode.

(2.) ARRL Public Information Officer, Paul Courson, WA3VJB, watched as the first amateur SSTV pictures from space were monitored at JSC (Johnson Space Center/Houston) "The color picture quality was very good," he said, "with very little snow or distortion."

(3.) Tony's operating schedule was very unpredictable due to earlier flight problems (early engine shutdown.) The 19th space shuttle mission got underway after a two and a half week delay.

(4.) The ionospheric propagation experiment that Tony England was involved in was termed successful although it had to be cut back somewhat due to excess propellant burned. Original plans were to blast eight holes in the ionosphere with Challenger's exhaust gases. This was cut to four. A ground based scientist in Tasmania (near Australia) was able to detect low-frequency cosmic radiation through one of the artificial ionospheric windows. The 25 second "burn" also provided the "kick" to activate a stubborn large solar telescope.

(5.) Published orbital data changed often because Challenger did not meet its expected orbit. The engine No. 1 shutdown occurred 67 miles above the earth when Challenger was climbing at 8,600 miles per hour! Fuel was burned off to save weight so Challenger could reach an orbit that was still safe, though lower.

(6.) Media coverage was hard to orchestrate because ham clubs could not insure that a contact would be made... or even that Tony would be on the air.

(7.) Shuttle commander Gordon Fullerton, who used to be a Novice ham operator, worked dozens of earth stations during the mission using Tony's amateur call sign. There is talk that Fullerton will again become a licensed ham operator.

(8.) ARRL PIO Paul Courson reports that the QSL cards are still being prepared at League headquarters. Reports are to be sent to: ARRL/Ham-in-Space; 225 Main St., Newington, CT 06111

(9.) An article on the WØORE amateur radio experiment will be covered in the October QST. Send media coverage reports to League HQ for possible inclusion in this article. Courson said he was particularly looking for broadcast (audio and TV) coverage.

WØORE CONTACTS ISRAELI WAR VETERAN

A charming human interest story surfaced about the Israeli radio contact that Tony England had. The background on this is that during the Owen Garriott, W5LFL, STS-9 shuttle mission, a scheduled QSO was set up

between Jordan's King Hussein and Garriott on an unpublished frequency. The idea was to get worldwide publicity for amateur radio. A TV film crew was even sent from the U.S. to film the contact between Hussein (who holds the 2 by nothing call of JY1) and Garriott. It made news everywhere.

Little thought was given to nearby Israeli amateurs who were also feverishly trying to contact Garriott. After the mission, I was forwarded a translated copy of the Israel Radio Club News bulletin that had some very harsh words indeed about the JY1 episode. The article (written entirely in Hebrew) was translated and sent to me by Joe Bonnett, W5III, a well known Dallas amateur who happened to be in Israel at the time.

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(4.) The ionospheric propagation experiment that Tony England was involved in was termed successful although it had to be cut back somewhat due to excess propellant burned. Original plans were to blast eight holes in the ionosphere with Challenger's exhaust gases. This was cut to four. A ground based scientist in Tasmania (near Australia) was able to detect low-frequency cosmic radiation through one of the artificial ionospheric windows. The 25 second "burn" also provided the "kick" to activate a stubborn large solar telescope.

(5.) Published orbital data changed often because Challenger did not meet its expected orbit. The engine No. 1 shutdown occurred 67 miles above the earth when Challenger was climbing at 8,600 miles per hour! Fuel was burned off to save weight so Challenger could reach an orbit that was still safe, though lower.

(6.) Media coverage was hard to orchestrate because ham clubs could not insure that a contact would be made... or even that Tony would be on the air.

(7.) Shuttle commander Gordon Fullerton, who used to be a Novice ham operator, worked dozens of earth stations during the mission using Tony's amateur call sign. There is talk that Fullerton will again become a licensed ham operator.

(8.) ARRL PIO Paul Courson reports that the QSL cards are still being prepared at League headquarters. Reports are to be sent to: ARRL/Ham-in-Space; 225 Main St., Newington, CT 06111

(9.) An article on the WØORE amateur radio experiment will be covered in the October QST. Send media coverage reports to League HQ for possible inclusion in this article. Courson said he was particularly looking for broadcast (audio and TV) coverage.

WØORE CONTACTS ISRAELI WAR VETERAN

A charming human interest story surfaced about the Israeli radio contact that Tony England had. The background on this is that during the Owen Garriott, W5LFL, STS-9 shuttle mission, a scheduled QSO was set up

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The unit has been in testing since just after the Dayton HamVention last April where it was introduced. They had everyone from very technically inclined hams (including Tom Clark, W3IWI, Ex-AMSAT prez) to a typical housewife put one together on the kitchen table to see if the average person could assemble it. TAPR feels that they have met that challenge. The average person can get it

together.

The actual making of the kits and getting them out the door is done in Tucson, Arizona. I spoke to their Vice President, Peter Eaton, WB9FLW, this past week but he lives in St. Louis. The software for the unit was done in Florida. The hardware work was done in New Jersey. The modem work was done in Chicago, Pete told me. TAPR is literally a world-wide organization where everybody takes their efforts and energies to try to develop this new digital technology and offer it to the amateur community at a very low price. No one is paid for their efforts.

About 5,000 of the original TNC-1 were sold. TAPR sold about 2,500 of the unit and Heathkit has sold at least 1,500 of the HD-4040... their version of the TAPR TNC-1. Other firms, such as AEA, also have a TAPR TNC-1 unit. TAPR feels that sales of the TNC-2 will far outdistance that of their first model.

Eaton said that packet radio will be to the eighties what 2-meter FM was to the seventies and sideband was to the fifties and sixties. The amount of interest being generating clearly shows this. They have a lot of tired people there at the tiny TAPR office. TAPR is a non-profit research and development corporation with only one paid employee... an office girl... Chris.

It was formed only three years ago under IRS-501C status. Their corporate structure is very similar to that of AMSAT. While expenses are reimbursed, no one is paid for their efforts. All engineering work was done gratis so that the amateur community could use this new technology. It is hard for commercial firms to understand TAPR's motivation. They don't even charge a consulting fee when assisting competitors! "We do it purely for the love of it."

What is surprising is that TAPR does not advertise. They have no type of marketing plan whatsoever, but the word got around that the TNC-2 would be available and TAPR has had calls from all over the world. A standing joke at TAPR Tucson is that they have have "Worked (Sold) All States" except

for Wyoming and Maine. (They did Work All Continents.)

Even the QST July and August articles never mentioned the TNC-2's price... or even their address. (By the way, the magic telephone number is 602-746-1166 Address: P.O. Box 22888; Tucson, Arizona 85734.) We think we are the first to publish it and hope that we don't cause them additional problems.

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R. L. DRAKE CONSIDERING SALE OF FIRM

Ex-ham equipment maker, R. L. Drake Company, now a major factor in the backyard satellite station market, has retained an investment firm to advise and consider proposals on a merger or acquisition of the firm. The Drake family has operated the communications manufacturing firm since 1943.

Their success came, however, just four years ago when they focused on satellite TV equipment. In 1982 their sales were \$14 million, earnings: \$2.4 million. Two years later their profit was \$14 million! They claim a 25% share of the satellite earth-station receiver market. Not bad for a company whose claim to fame for forty of their forty-three year history was amateur and marine radio products!

●The ARRL Letter has a new editor! He is AK7M, David Newkirk. His father was the DX editor for QST for years! Dave's title is actually, Manager, Regulatory Information Branch. Bruce Hale, KB1MW, previous ARRL Letter editor is now in the League's technical department.

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●SPACE, the Satellite Television Industry Association, has told members not to pay fees imposed by TBS, ESPN and USA network for reception of their unscrambled signals by home earth station owners. SPACE said the fees were not valid since they were higher than those charged cable subscribers and not set through "good faith marketplace negotiation." SPACE quoted Barry Goldwater as saying that rates can not be unilaterally imposed.

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W5YI REPORT.....

Page #9

September 1, 1985

MORE ON WIRE(LESS) TAPPING....

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DO YOU EXCERPT OR QUOTE FROM "THE W5YI REPORT?"

WOULD YOU DO US A FAVOR?

This is, of course, allowed without limitation. The W5YI Report appears on many computer bulletin boards and in club newsletters. We do not get any income from this and would appreciate it if you would publish our small classified ad (see margin between pages 4 & 7) on license preparation materials. Thanks!

WOULD YOU DO US A FAVOR?

Monitoring) systems and ISM (Industrial, Scientific and Medical) devices. (Note that microwave ovens operate between 902 and 940 MHz.) Amateurs must not cause any interference to Government or AVM operations.

Digital transmissions can be of any bandwidth as long as the emission remains inside the 902-928 MHz. ham band. (A 100 kHz bandwidth remains in effect between 220 and 902 MHz.)

ARRL APPROVES BAND PLAN OCTOBER '84

The following interim band plan has already been adopted by the ARRL Board of Directors.

902-928 MHz BAND PLAN
 902-904 MHz Narrow Band Weak Signal
 902.0-.8 SSTV, FAX, ACSB, Experimental
 902.8-903.0 EME, CW Expansion
 903.0-.05 EME (Earth-Moon-Earth)
 903.07-.08 CW Beacons
 903.1 CW, SSB Calling Frequency
 903.4-.6 Crossband Linear Translator Inputs
 903.6-.8 Crossband Linear Translator Outputs
 903.8-904.0 Experimental Beacons
 904-906 Digital Communications
 906-907 Narrow-Band FM simplex channels every 25 kHz.
 906.5 National Simplex Frequency
 907-910 FM Repeater Inputs (119 pairs every 25 kHz beginning at 907.025)
 910-916 Amateur Television
 916-918 Digital Communications
 918-919 Narrow Band FM Control Links and remote bases
 919-922 FM Repeater Outputs
 922-928 Wide-Band Experimental, Simplex ATV, Spread Spectrum.

The band is available to the amateur community effective 0001 UTC, September 28, 1985.

(Action by FCC, adopted August 9, 1985)

ADD NOVICE EXAMS TO VEC PROGRAM...

Robert A. Scupp, WB5YYX, has filed a Petition for Reconsideration of an FCC proposal (NPRM Docket 85-196) that specifies Volunteer Examiners solely... rather than VE's and Volunteer Examiner Coordinators

both... create Novice tests. Scupp feels that VEC's should have these test materials available for VE use should they be needed.

Scupp says that proposed §Part 97.517 does not provide for a VEC designing, assembling, printing and distributing Element 2 (Novice written test) or Element 1A (Novice 5-wpm code) examinations, therefore the proposal does not permit the VE team to obtain Element 2 or 1A examinations from the VEC.

He asks that VEC's not only maintain the Novice question pool, but also have available for volunteer examiner use both a 5 w.p.m. code test and the Element 2 written examination.

Scupp points out that the Commission said in their Report and Order (Docket 82-727, July 18, 1983) that they "may consider (including Novice exams) at a later date after evaluating the success of the broader program."

"The Commission's original intent was to delegate the entire examination process to VEC's in whole," Scupp argued in his August 13th Petition for Reconsideration. He suggested that any Volunteer Examiner Coordinator that objects to providing Novice test materials should reevaluate continuing as a VEC.

ARRL ON ENHANCED NOVICE PRIVILEGES

The ARRL Board of Directors has voted to petition the FCC to require two or more General Class operators to administer the Novice amateur radio operator test - Elements 1A and 2. Only one is required now. Reason officially given is to "increase the perceived integrity of the Novice Class license"... particularly in view of the sure-to-come increased Novice privileges which is certain to include HF voice privileges for the first time.

The League has formally replied to the Comments filed on their proposal for Novice Class enhancement. The ARRL reaffirmed their position that additional questions should be required in the Element 2 (written) Novice examination covering the new voice and data privileges proposed in their petition.

NOW... THE "GOOD NEWS"... 902-928 MHz.

The FCC proposed in the NPRM last fall to implement allocation of the 902-928 MHz (35 centimeter) frequency band to the Amateur Radio Service in all of the United States except for Colorado, Wyoming and U.S. possessions in Region 3. "US267", (a WARC footnote) specifically prohibits 902-928 MHz amateur operation within the states of Colorado and Wyoming, bounded by the area of: latitude 39° N to 42° N and longitude 103° W to 108° W.

WHAT DID THE COMMENTS SAY?

Not all of the comments were in favor of adding the band to the amateur service. Many commenters (mostly business firms and telecommunications groups) felt that since the FCC rejected PRCS (Private Radio Communications Service)... the amateur service should be required to make a showing of the need for the 902-928 frequency band. Some firms said flatly that the Amateur Radio Service did not need the spectrum.

PRCS was to have been an innovative low cost mobile telephone service utilizing 900-MHz addressable microprocessor based radio links to a user's own home or office telephone. It was proposed by General Electric three years ago in a massive three pound bound volume petition. The FCC refused to consider the service further when GE said they were pulling out of the project. The Commission also said that there was an inadequate amount of spectrum in the land mobile reserve - unallocated frequencies that lie between the UHF TV band and 950 MHz - to accommodate all requirements of petitioners.

Maintaining that another widely used secondary personal radio service "could receive considerable harmful interference from and cause harmful interference to current primary government military radiolocation users, the FCC said... "We therefore decline to consider a personal radio service allocation in the 902-928 MHz band in this proceeding. The amateur community faces no additional burden of proof to retain the 902-928 MHz domestic allocation..."

Three firms opposed the amateur radio service 900-MHz allocation on the basis that it would interfere with Part 15 field disturbance sensors - those gadgets that sound an alarm when someone enters a protected area - which are also authorized in this band. The FCC pointed out that Part 15 devices are also secondary and must not cause harmful interference to and must suffer interference from all other operations.

One amateur, Joseph Schroeder, W9JUV, recommended reducing amateur power levels in Colorado and Wyoming rather than prohibiting all amateur operations there. The Commission said that Government (military) operations in that area required protection from interference, but that they expected this requirement would become unnecessary and could be dropped within a year.

WHAT WAS AUTHORIZED FOR 902-928 MHz?

While not a part of the original WARC footnotes, the Commission is prohibiting amateur 902-928 MHz operation inside the White Sands Missile Range and restricted amateur power levels to a maximum transmitter peak envelope power output of 50 watts. "This action is necessary to protect essential primary radiolocation operations at the range," the FCC ruled.

In their comments, amateurs wanted full 1500 watt peak envelope power for 902-928 MHz stations in repeater operation, wideband digital transmissions and the capability to transmit communications consisting of multiplexed channels. With the exception of the White Sands restriction, the FCC approved this for all stations.

A wide variety of emissions were authorized... N0N, A1A, A2A, A2B, A3E, A3C, A3F, F1B, F2B, F3E, G3E, F3C, F3F, F8E, P0N. There are no subbands. No 902-928 operation is authorized to U.S. possessions outside of Region 2 since the amateur service is only ITU allocated in Region 2, North and South America.

Amateur use of this band will be secondary to operation of Government radiolocation stations, AVM (Automatic Vehicle

"I am a currently licensed Extra Class amateur radio operator and wish to be a volunteer examiner. I have never had my station or operator license revoked or suspended. I do not own a significant interest in nor am an employee of any company or entity engaged in making, preparing or distributing amateur radio equipment or license preparation materials. My age is at least 18 years old."

WOULD YOU LIKE TO BECOME A VOLUNTEER EXAMINER? If so, please send a copy of your Extra Class license, this signed statement, and a SASE to: W5YI-VEC; P.O. Box #10101; Dallas, Texas 75207. A certificate (optional) is also available for \$1.00. Details and accreditation materials will be sent to you within a two week period.

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COMMERCIAL RADIOTELEPHONE OPERATOR EXAMS STILL GIVEN BY FCC....

Marty Schwartz, KB2LO, of AMECO writes that the FCC is indeed still giving the commercial radio operator exam. He is right!

Even though not required for maintenance of land mobile, personal radio (CB, radio control and GMRS) and other domestic services... a commercial radiotelephone operator license is still required in the Aviation, Maritime and International Public Fixed radio services since their operation is international in scope.

For other than these services, the FCC recommends you seek "industry certification." Many candidates are still applying (and taking) the commercial (General Radiotelephone) test, even though they don't need it. I guess they feel better having a bona-fide government license rather than certification. Also the cost is free! Not so with industry certification.

Operating domestic AM/FM/TV broadcast equipment does require a commercial license of sorts. One is easily obtained by simply filling out an application and certifying that you can keep at least a rough written log, know the applicable rules, can speak and hear, are eligible for employment in the U.S. and are at least 14 years old.

Get Form 753 from the FCC. Required by the 1979 Geneva WARC accord, there is no test to take and it carries a lifetime term.

ANOTHER ORIGIN OF THE WORD "HAM"...

I have heard many versions of the source of the word "ham" as in ham radio operator. We have printed some of them. There are so many they could almost fill a volume. Here is another.

It seems that back in 1908 one of the first wireless stations was operated by some members of the Harvard Wireless Club. They were Albert S. Hyman, Bob Almy and Reggie Murray. The station name went from Hyman-Almy-Murray, to HY-AL-MU and finally HAM,

it being easier to send in CW. In the early unregulated pioneer days of radio, amateur operators picked their own frequency and call letters.

As the story goes, in 1911, Albert Hyman did a thesis at Harvard on the controversial Wireless Regulation Bill. It ended up at the Senate Committee considering the bill. The little HAM station became the symbol of all the amateur stations in the country crying out to be saved from the menace and greed of the big commercial stations that didn't want them around.

Supposedly the story is chronicled in the Congressional Record. I would sure like to see it! A good story non-the-less.

LICENSE FEE REFUND PROGRAM TO END

The Commission has announced that effective October 31, 1985, it is discontinuing its license fee refund program.

The Fee Refund Program was a two-phased program implemented to return a portion of the fees collected by the FCC between August 1, 1970, and December 31, 1976. Phase I was limited to those fees which were more than \$20; Phase II to fees \$20 or less. CB licenses that cost \$4. (granted March 1, 1975, or later) were exempted from refund since it would cost more to refund the excess than the refund itself.

The refund program was set in motion when the Commission was ordered by the courts to return license fees collected in excess of actual administrative cost. By law, federal agencies aren't allowed to profit from their activities. During the last six years of license fees, the FCC collected a whopping \$75 million in fees.

If you paid for a ham license examination during the 1970 to 1976 period, you can apply for a partial refund. Instruction booklets and refund forms are available from local FCC field offices or from the: FCC Fee Refund Program Office; P.O. Box #19209, Washington, DC 20036. Applicants should specify whether they are seeking refunds under Phase I or II.